Gustatory and Olfactory Hallucinations Under Therapeutic Dosing of Bupropion

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To the Editor: The antidepressant bupropion acts via dual inhibition of dopamine and norepinephrine reuptake, without a serotonergic activity.[1] Various case reports exist in the literature about psychotic phenomena after bupropion intake.[2,3] Specifically, the literature documents case reports of auditory,[2] visual,[4] and tactile[5] hallucinations. To our knowledge, this is the first case of olfactory and gustatory hallucinations in an adult taking a low therapeutic dose of bupropion, without any predisposing factors.

Case Report

Ms. X. is a 36-year-old woman without any psychiatric history, including abuse of alcohol, consumption of illegal drugs, or regular consumption of medication. She reported a depressed mood that lasted 2 weeks. She had to cry very often, without any trigger. Furthermore, she suffered from loss of concentration, a high sleep requirement, ruminations, anhedonia, and a reduced libido. Her mother suffered from a recurrent depressive disorder, and her father was addicted to alcohol. According to the described pathology above, the patient fulfilled the DSM-IV criteria for a major depression. Because of her emotional discomfort, anhedonia, and reduction in libido, an antidepressant pharmacotherapy with 150 mg daily bupropion, extended release, was launched. Ten days later, Ms. X. reported that, upon starting the medication regimen, she had been overly sensitive to stimuli such as noise. Furthermore, she had been anxious, had a headache, and tachycardia. Six days after taking the bupropion extended release she noticed gustatory and olfactory hallucinations. For example, a meal with chicken would have tasted of liver, while her office, as well as the waiting room of her general practitioner, would have smelled intensely of her boss's perfume, even though he had been on vacation that week. Orientation and concentration were unremarkable. Delusions and disorders of ego did not emerge. She continued the medication, and, after 2 days, the pathology disappeared. The bupropion level in serum during the follow-up appointment was 65.0 ng/ml (standard value: 50 ng/ml–450 ng/ml). Six weeks later, at a follow-up appointment, Ms. X. did not report any further side effects of the medication. Further diagnostic procedures such as MRI were declined by the patient.

Discussion

There are only few case reports about hallucinations in adults after taking bupropion in therapeutic doses.[5]

Upon reviewing the published literature, we hypothesize various risk factors for hallucinatory symptoms after taking bupropion. Vulnerability has been described for elderly patients and for patients with a history of psychosis[3] or bipolar disorder.[4] Bupropion acts inter alia among the inhibition of dopamine reuptake. This may cause dopaminergic overdrive and thereby cause hallucinations. Our case demonstrates that also apparently healthy adults taking a low-dose medication may develop hallucinatory phenomena as side effects. The responsible risk factors in this case remain unknown. Therefore information about the side effect of hallucination should be considered before prescribing bupropion.

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